

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* WILLIAM E. BAY

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Appeal No. 1999-1153  
Application 08/324,549

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ON BRIEF

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Before OWENS, LORIN and MOORE, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This appeal is from the final rejection of claims 1-12, 15-19 and 21-37, which are all of the claims remaining in the application.

*THE INVENTION*

The appellant's claimed invention is directed toward a process for making an acid amide by contacting an (Si, Ge or

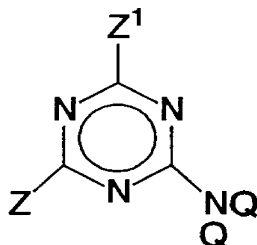
Sn substituted amino)-1,3,5-triazine having a recited general

formula with an acid halide. Claim 1 is illustrative:

1. A process for preparing acid amides which comprises the step of contacting:

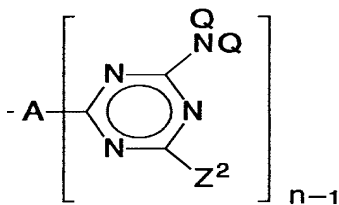
(a) a (Si, Ge or 1,3,5-triazine formula:

Sn substituted amino)-represented by the



wherein

Z and Z<sup>1</sup> are selected from the hydrogen, a hydrocarbyloxy, a group represented by and a group formula



independently group consisting of hydrocarbyl, a hydrocarbylthio, a the formula N(Q)<sub>2</sub>, represented by the

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each Q is independently selected from the group consisting of hydrogen, hydrocarbyl, hydrocarbyloxy hydrocarbyl and  $M(R^1)_3$ , provided that at least one Q group is  $M(R^1)_3$ ,

A is an n-functional anchor,

n is at least 2,

each  $Z^2$  is independently selected from the group consisting of hydrogen, a hydrocarbyl, a hydrocarbyloxy, a hydrocarbylthio and a group represented by the formula  $N(Q)_2$ ,

each M is independently selected from the group consisting of silicon, germanium and tin, and

each  $R^1$  is independently selected from substituted or unsubstituted alkyl, alkenyl, aryl, aralkyl and alkoxy groups; and

(b) an acid halide,

under reaction conditions sufficient to produce a corresponding acid amide derivative.

#### THE REFERENCES

Gizycki et al. (Gizycki)	3,732,223	May 8,
1973		
Jacobs, III et al. (Jacobs)	4,939,213	Jul. 3,
1990		

*Chemical Abstracts* AN 104:148979 (CA '979), abstract of

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Maurizio Taddei and Federica Tempesti, "Aminosilanes in organic synthesis: preparation of N,N'-disubstituted putresceine derivatives", 15 *Synth. Commun.* 1019-24 (1985).

*Chemical Abstracts* AN 107:58801 (CA '801), abstract of Paul Louis Compagnon et al., "Pyridines; XV. Synthesis of enamides by selective N-acylation of silylated primary enamines; results of the regioselective metalation of s-collidine, 2,4-lutidine and 2,4-dimethylquinoline", *Synth.* 948-52 (1986).

Dennis P. Phillion et al. (Phillion), "Large-Scale Synthesis of Pinacol Iodomethaneboronate and Its Application to (Acylamino)methaneboronates via (Trimethylsilyl)lithioamines", 51 *J. Org. Chem.* 1610-12 (1986).

Sundaramoorthi Rajeswari et al. (Rajeswari), "A New Synthesis of Amides from Acyl Fluorides and N-Silylamines", 28 *Tetrahed. Lett.* 5099-102 (1987).

#### THE REJECTIONS

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1-12 and 15-19 over Phillion, Rajeswari, CA '979 or CA '801, and claims 21-37 over Gizycki in view of Jacobs.<sup>1,2</sup>

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<sup>1</sup> Claims 29 and 30, which depend indirectly from claim 1, should have been included in the rejections of that independent claim instead of the rejection of independent claim 21. Because the rejections of the independent claims are reversed, this error is not material to our decision.

<sup>2</sup> Claims 9 and 29 are duplicates, as are claims 10 and 30. Also, claim 10 depends from itself. The examiner and the

*OPINION*

We reverse the aforementioned rejections. We need to address only the independent claims, i.e., claims 1 and 21, to which, respectively, the first and second rejections are applied.

*Rejection of claim 1*

The examiner points out that Phillion (page 1611, scheme 1, conversion of 6 to 7), Rajeswari (page 5100, conversion of 1 to 3), CA '979 (reaction 5), and CA '801 (reaction 5) disclose reactions of silylamine compounds with acid halides (answer, pages 4-5). The examiner argues that the only difference between the appellant's claimed process and the processes in the references is that they use different silylamine starting materials (answer, page 5). The examiner argues that one of ordinary skill in the art would have been motivated to use the appellant's (Si-substituted amino)-1,3,5-triazines as the starting material in the processes of the references because they were known compounds and, because they are analogous to the starting materials in the references in

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appellant should correct these errors.

that they are silylamines, they would have been expected by one of ordinary skill in the art to react similarly to the starting materials in the references (answer, pages 5 and 8).<sup>3</sup>

Although the appellant has challenged the examiner's argument that one of ordinary skill in the art would have expected (Si substituted amino)-1,3,5-triazines to react similarly to other silylamines (brief, page 5), the examiner has provided no support for this argument. The examiner has provided mere speculation, and such speculation is not a sufficient basis for a *prima facie* case of obviousness. See *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968); *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360, 364 (CCPA 1962).

As pointed out by the appellant (brief, page 4), the

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<sup>3</sup> The examiner actually has not established that the appellant's (Si substituted amino)-1,3,5-triazines were known compounds. The examiner argues that "the starting material triazino [sic, triamino] 1,3,5-triazine (Melamine) is also not novel or unobvious and is well known to a person of ordinary skill" (answer, page 8). Melamine, however, does not fall within the scope of the formula in the appellant's claim 1 which requires an Si, Ge or Sn substituted amino group. The appellant, however, does not argue that the (Si, Ge or Sn substituted amino)-1,3,5-triazines were unknown at the time of his invention.

examiner's argument that application of a known process to a new starting material would have been obvious to one of ordinary skill in the art (answer, pages 5 and 8) is based upon a *per se* rule. As stated by the court in *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995):

The use of *per se* rules, while undoubtedly less laborious than a searching comparison of the claimed invention - including all its limitations - with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. *Per se* rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. Indeed, they have been sanctioned by the Board as well. But reliance on *per se* rules of obviousness is legally incorrect and must cease.

The examiner has not carried out the required fact specific analysis. That is, the examiner has not explained why evidence

relied upon by the examiner shows that one of ordinary skill in the art would have been led to make acid amides by the process recited in the appellant's claims, and would have had a reasonable expectation of success in doing so. See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir.

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1991); *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988); *In re Longi*, 759 F.2d 887, 892-93, 225 USPQ 645, 648 (Fed. Cir. 1985).

The examiner argues that the majority in *In re Ross*, 305 F.2d 878, 881, 134 USPQ 320, 322 (CCPA 1962), agreed with the examiner and the board that once the examiner cited prior art showing a general reaction to be old, the burden was on the appellants to present reason or authority for believing that a particular group in the appellants' compound would take part in or affect the basic chlorination reaction disclosed in the references. Since *Ross*, however, the court, as indicated by *Ochiai* as set forth above and by *In re Brouwer*, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996), has held that reliance upon *per se* rules of obviousness, such as that relied upon by the majority in *Ross*, is improper, and that, instead, an analysis based upon the particular facts of a case is required.



The examiner argues that *Ochiai* and *Brouwer* are not on point because, unlike in those cases, the appellant's process makes a known product (answer, pages 7-8).<sup>4</sup> Regardless of this factual distinction, the examiner must make the fact-based analysis required by those cases, and the examiner has not done so.

For the above reasons, we conclude that the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the process recited in the appellant's independent claim 1 over Phillion, Rajeswari, CA '979 or CA '801. Consequently, we reverse the rejections over these references.

*Rejection of claim 21*

Regarding Gizycki, the examiner argues: "The prior art teaches an analogous process of preparing amides by reacting amino triazine with phosgene. See column 2, Reactions (A)

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<sup>4</sup> The product made by the process in *Ross*, like those in *Ochiai* and *Brouwer*, was novel and unobvious. See *Ross*, 305 F.2d at 881, 134 USPQ at 322.

and (B)" (answer, page 5).<sup>5</sup> The examiner argues that the appellant's (Si, Ge or Sn substituted amino)-1,3,5-triazines and Gizycki's amino-s-triazines which do not have an Si, Ge or Sn substituted amino group are analogous in that they are both triazines, and that one of ordinary skill in the art would have been motivated to use the appellant's triazines in Gizycki's process because such a person would have expected analogous triazines to react similarly (answer, pages 5-6). Although the appellant argues that one of ordinary skill in the art would not have had a reasonable expectation of success in making this substitution (brief, page 6), the examiner provides no evidence in support of his argument. Instead, he merely relies upon a *per se* rule of obviousness. As discussed above regarding the rejection of claim 1, such reliance upon a *per se* rule is improper. Accordingly, we reverse the rejection over Gizycki

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<sup>5</sup> Actually, in reactions (A) and (B) Gizycki reacts amino-s-triazines with oxalyl chloride. Gizycki teaches that phosgenation of amines fails when applied to amino-s-triazines (col. 1, lines 57-62).

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in view of Jacobs.<sup>6</sup>

*DECISION*

The rejections under 35 U.S.C. § 103 of claims 1-12 and 15-19 over Phillion, Rajeswari, CA '979 or CA '801, and claims 21-37 over Gizycki in view of Jacobs, are reversed.

*REVERSED*

TERRY J. OWENS )  
Administrative Patent Judge )  
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<sup>6</sup>Jacobs is relied upon by the examiner (answer, page 6) only for a suggestion of reacting the product of the appellant's claim 21 with an isocyanate-reactive material as recited in the appellant's dependent claims 31-33, and not for a disclosure which remedies the above-discussed deficiency in Gizycki.

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	)	BOARD OF PATENT
HUBERT C. LORIN	)	
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	)	INTERFERENCES
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JAMES T. MOORE	)	)
Administrative Patent Judge	)	

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